Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS)

Pre-Solicitation Conference

8 February 2007

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Opening Remarks

CAPT Paul Morgan
Navy & Marine Corps Unmanned Air Systems
PMA 263

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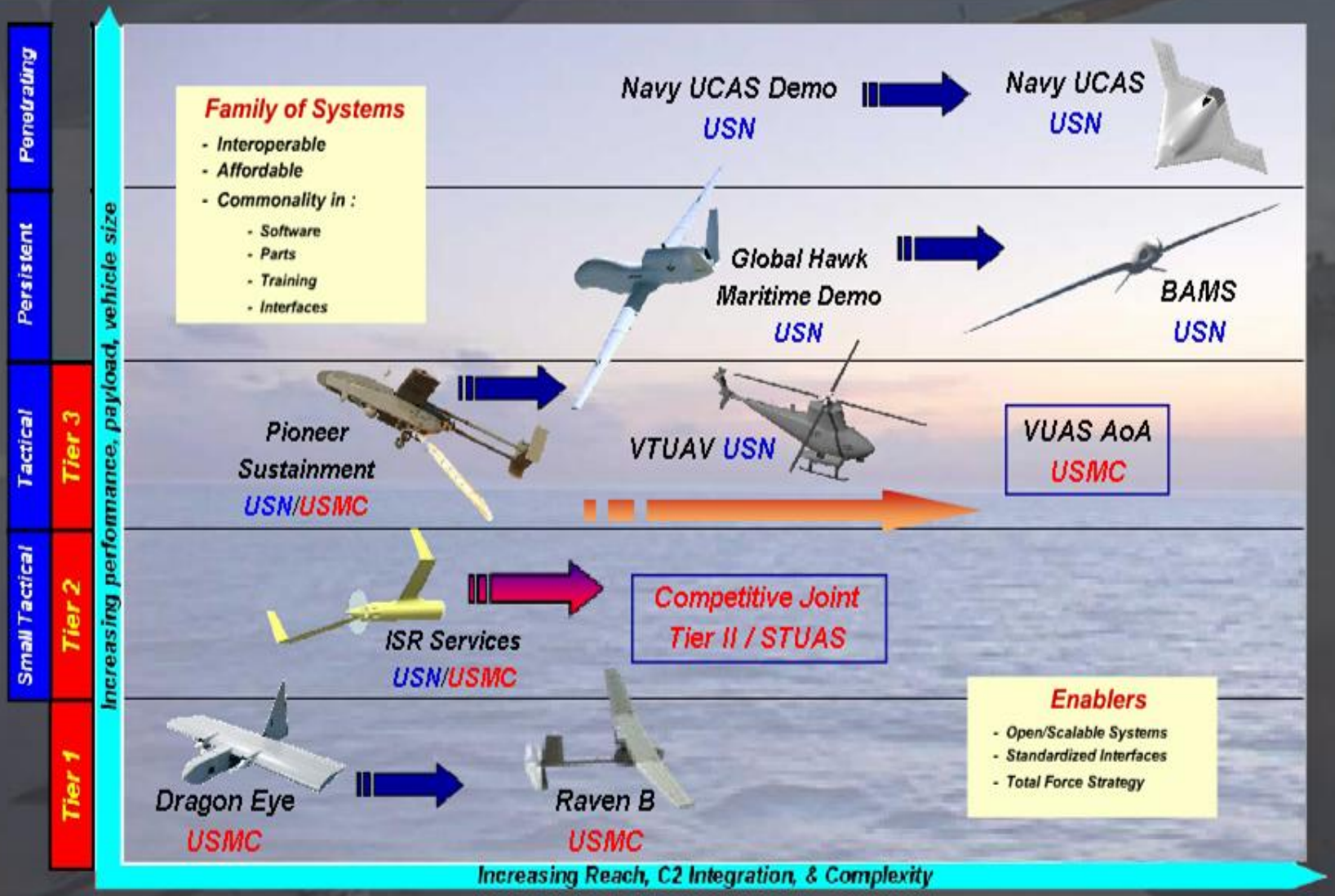
Naval UAS Family of Systems



Agenda

1300 - 1305 Opening Remarks – CAPT Paul Morgan

1305 - 1315 Program Overview – CDR Bob Dishman

1315 - 1330 Australian Air 7000 Program Overview – GPCAPT Nelson

1330 - 1345 BAMS UAS CONOPS – LCDR Tim Day

1345 - 1445 Draft PBSS Modifications - Mr. Tom Garrett

Draft RFP Modifications (Section L)

1445 - 1500 Draft Cost Proposal Modifications – Ms. Monica Smith

1500 - 1515 Draft RFP Modifications (Sects A-J) – Ms. Clare Carmack

1515 - 1545 Break

1545 - 1600 Question/Answers – Ms. Stacy Bostjanick

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Program Overview

CDR Bob Dishman
BAMS UAS IPT Lead

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Admin Remarks

- Silence all Cell phones and pagers
- No recording of presentation
- Briefings will be posted on the PMA 263 website
  - http: //uav.navair.navy.mil

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Question & Answer Session

- All questions shall be received in writing
  - » Submit written question using the form provided
  - » Place form in drop-off box
- All questions may not be answered in open forum due to time constraints
- Questions not addressed in open forum will be reviewed and answers may be posted on the website

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Follow-on Communications

- **25 SEP 06 FedBizOps Announcement:**

"The program leadership will accept briefings up until the time the draft Request for Proposal (RFP) is approved for release by the Government, anticipated to be in the October 2006 timeframe."

- **All communications shall be coordinated via the Contracting Officer/Contracts Specialist**

- Contracting Officer: **Ms. Stacy Bostjanick (AIR 2.4.2.1)**
  - **Telephone No.: (301) 757-5931**
  - **Email:** stacy.bostjanick@navy.mil

- Contract Specialist: **Ms. Clare Carmack (AIR 2.4.2.1.1)**
  - **Telephone No.: (301) 757-5919**
  - **Email:** clare.carmack@navy.mil

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Since we last met…

- Capabilities Development Document (CDD) signed by CNO in DEC 06
  - Functional Capabilities Board approval on 23 JAN 07
  - Joint Capabilities Board scheduled fro 21 FEB 07
  - JROC approval anticipated in MAR 07
- Acquisition Strategy Report (ASR) approved on 25 JAN 07
- Performance Based System Specification (PBSS) approved FEB 07
  - Government System Requirements Review (SRR) conducted NOV 06
  - OSD Program Support Review (PSR) completed DEC 06
  - Numerous comments from Industry adjudicated
  - Australian Unique Objectives incorporated
- Project Agreement for Pre-System Development and Demonstration (SDD) with Australia AIR 7000 Program approved 13 JAN 07
- President's Budget 08 released

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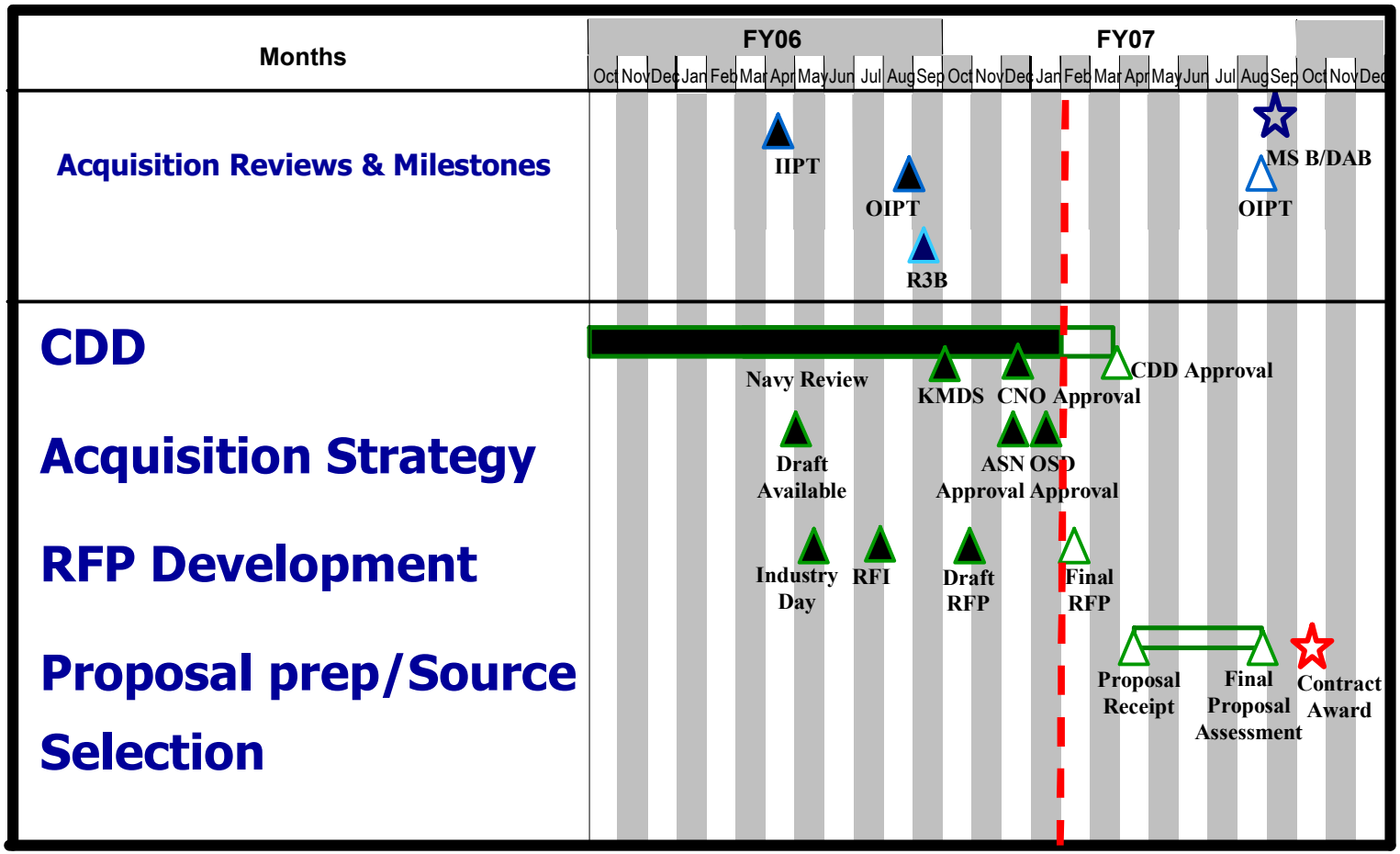
Schedule to MS B



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Government Comments

- **Design Reference Mission**
  - Provides operational context to facilitate understanding of requirements
- **CDD Objectives incorporated into PBSS**
- **PUMAS data**
  - Validated requirements as stated in the BAMS ORD
  - Government assessing releasability of Phase I and Phase II Final Reports
- **GHMD Lessons Learned**
  - Validated sensor Field of Regard requirements for BAMS
  - Due Regard capability is essential to effective maritime operations
  - Data management doctrine needs to be developed/refined

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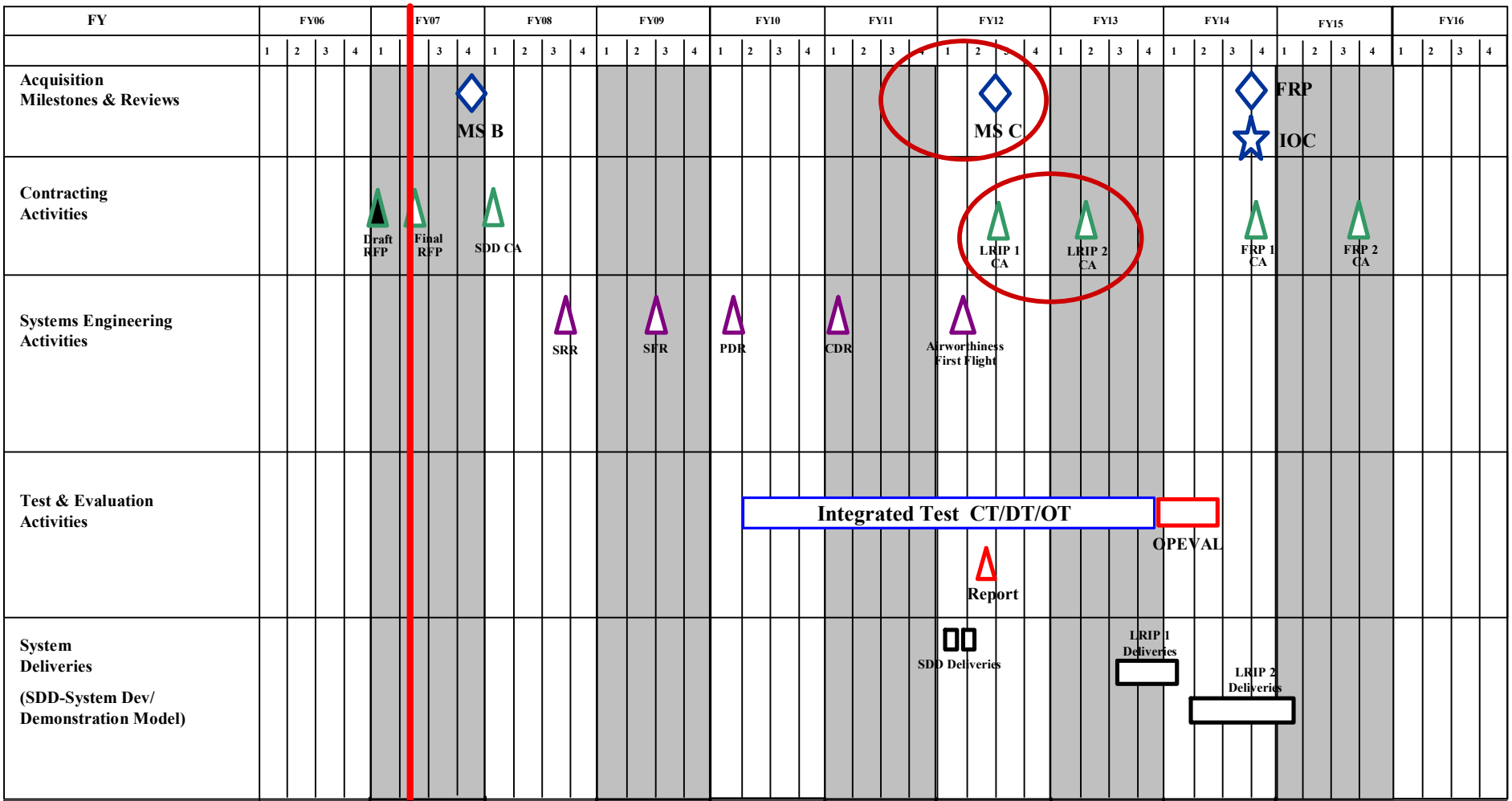
Notional Program Schedule



PB-08 RDT&E ($M)	N/A	26.4	116.7	480.3	560.9	466.2	386.6	281.6	TBD	Total: 2,318.5

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Summary

- **Navy is committed to the BAMS UAS Program**
  - **RDT&E Funding increased by $1.3B in the FYDP**
- **Final RFP release planned for mid-February**
- **Execute a full and open competition to support a 4th Qtr FY07 MS B decision**
- **SDD contract award planned for 1st Qtr FY08**
- ***Deliver persistent ISR capability to the Fleet***

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AIR 7000
Program Overview

Group Captain Warren Nelson
Royal Australian Air Force

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Scope

- Strategic Context to BAMS Cooperation
- Overview of Air 7000
- Air 7000 Phase 1
- Air 7000 & BAMS

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Strategic Context to BAMS Cooperation

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Commemorating 50 Years

With their hands over their hearts, President Bush and Australian Prime Minister John Howard perform a military pass and review at the Washington Navy Yard Sept. 10, 2001. Commemorating 50 years of military alliance, the President and Prime Minister spoke to assembled military personnel, shared lunch and spoke privately in the Oval Office. White House photo by Tina Hager.

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… And Continuing

Stories were exchanged and as President Bush presented Australian Prime Minister Howard with the bell from the U.S.S. Canberra at a ceremony commemorating 50 years of military alliance. "The President had received word of an exceptional action in battle by the Australian Navy, which were steaming alongside American vessels at Guadalcanal. His Majesty's Australian ship Canberra did not survive the battle, disappearing into the depths where she rests today," explained the President. White House photo by Tina Hager.

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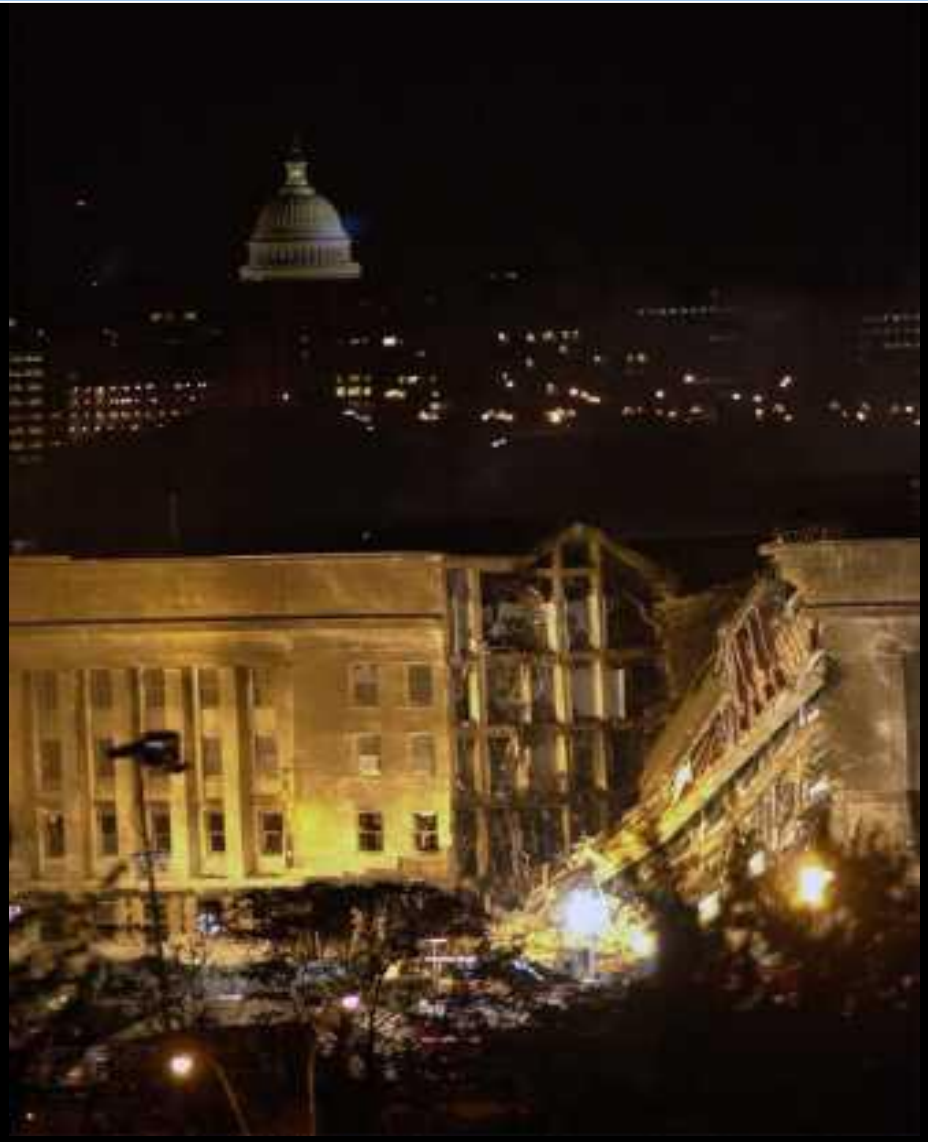

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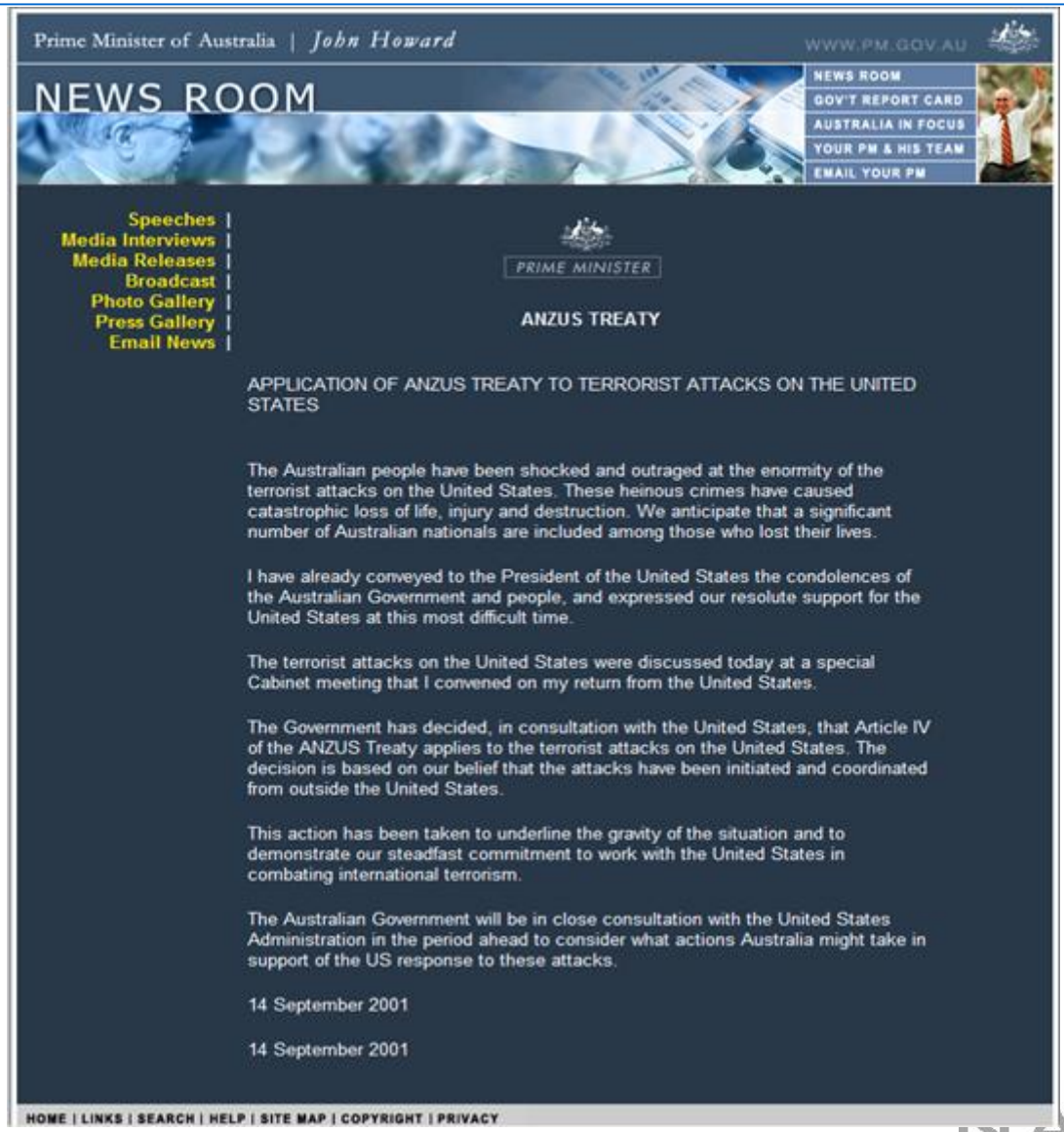
ANZUS Treaty



Prime Minister of Australia | John Howard

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PRIME MINISTER

ANZUS TREATY

APPLICATION OF ANZUS TREATY TO TERRORIST ATTACKS ON THE UNITED STATES

The Australian people have been shocked and outraged at the enormity of the terrorist attacks on the United States. These heinous crimes have caused catastrophic loss of life, injury and destruction. We anticipate that a significant number of Australian nationals are included among those who lost their lives.

I have already conveyed to the President of the United States the condolences of the Australian Government and people, and expressed our resolute support for the United States at this most difficult time.

The terrorist attacks on the United States were discussed today at a special Cabinet meeting that I convened on my return from the United States.

The Government has decided, in consultation with the United States, that Article IV of the ANZUS Treaty applies to the terrorist attacks on the United States. The decision is based on our belief that the attacks have been initiated and coordinated from outside the United States.

This action has been taken to underline the gravity of the situation and to demonstrate our steadfast commitment to work with the United States in combating international terrorism.

The Australian Government will be in close consultation with the United States Administration in the period ahead to consider what actions Australia might take in support of the US response to these attacks.

14 September 2001

14 September 2001

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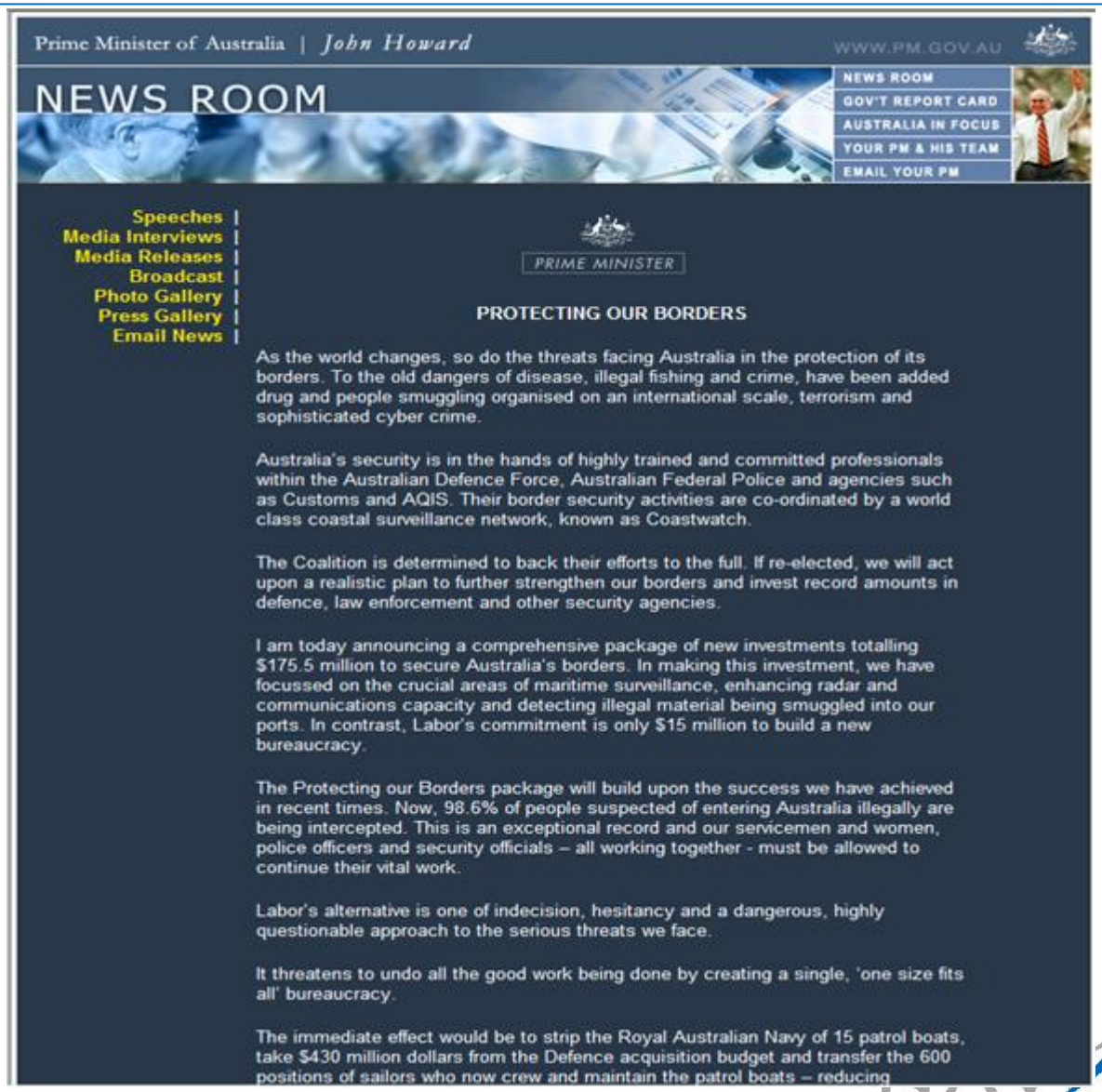
Australia's Borders



Prime Minister of Australia | John Howard

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PRIME MINISTER

PROTECTING OUR BORDERS

As the world changes, so do the threats facing Australia in the protection of its borders. To the old dangers of disease, illegal fishing and crime, have been added drug and people smuggling organised on an international scale, terrorism and sophisticated cyber crime.

Australia's security is in the hands of highly trained and committed professionals within the Australian Defence Force, Australian Federal Police and agencies such as Customs and AQIS. Their border security activities are co-ordinated by a world class coastal surveillance network, known as Coastwatch.

The Coalition is determined to back their efforts to the full. If re-elected, we will act upon a realistic plan to further strengthen our borders and invest record amounts in defence, law enforcement and other security agencies.

I am today announcing a comprehensive package of new investments totalling $175.5 million to secure Australia's borders. In making this investment, we have focussed on the crucial areas of maritime surveillance, enhancing radar and communications capacity and detecting illegal material being smuggled into our ports. In contrast, Labor's commitment is only $15 million to build a new bureaucracy.

The Protecting our Borders package will build upon the success we have achieved in recent times. Now, 98.6% of people suspected of entering Australia illegally are being intercepted. This is an exceptional record and our servicemen and women, police officers and security officials – all working together - must be allowed to continue their vital work.

Labor's alternative is one of indecision, hesitancy and a dangerous, highly questionable approach to the serious threats we face.

It threatens to undo all the good work being done by creating a single, 'one size fits all' bureaucracy.

The immediate effect would be to strip the Royal Australian Navy of 15 patrol boats, take $430 million dollars from the Defence acquisition budget and transfer the 600 positions of sailors who now crew and maintain the patrol boats – reducing

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Small Targets

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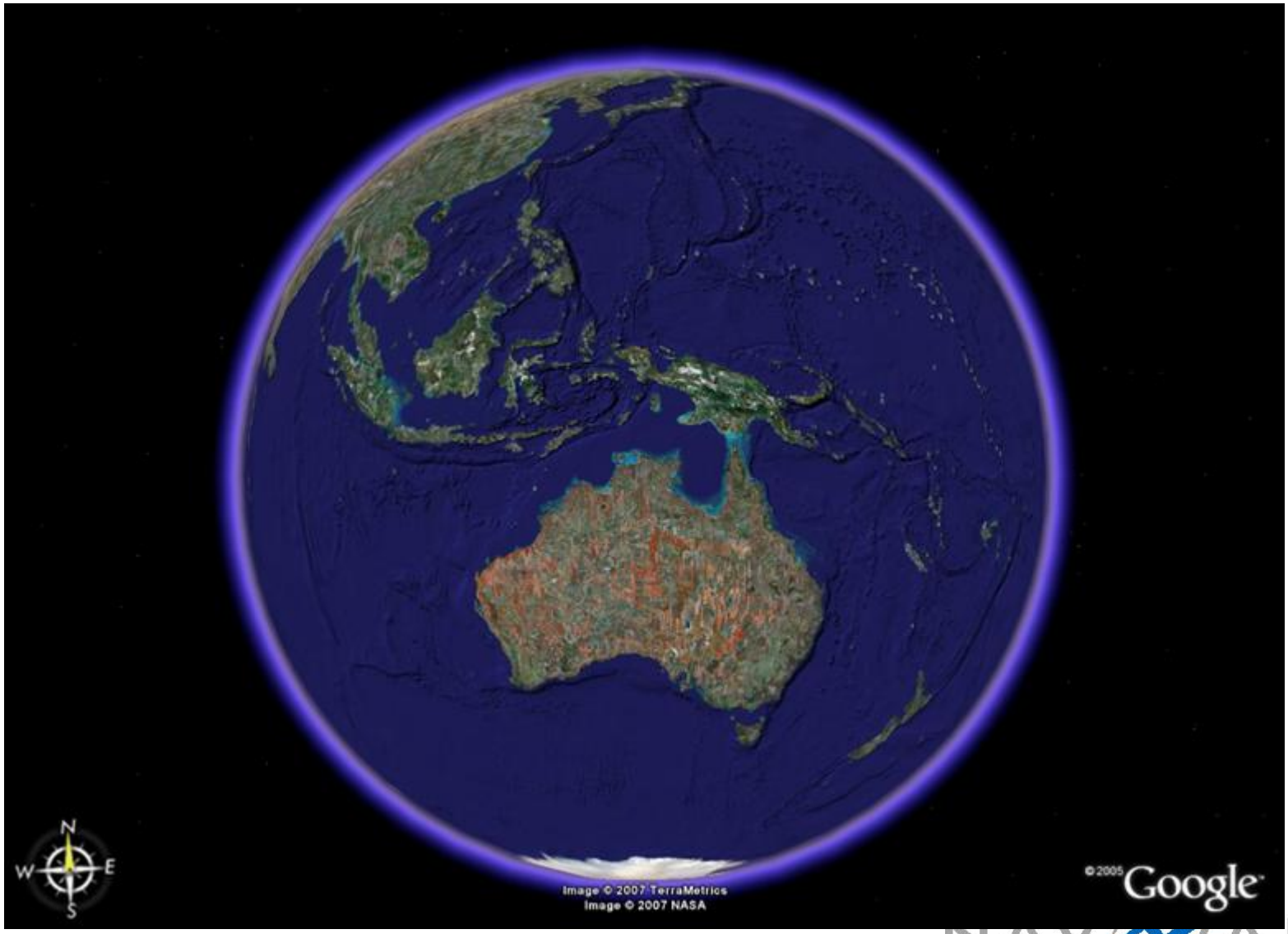
Australia's Neighbourhood



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Evolving Land Requirements

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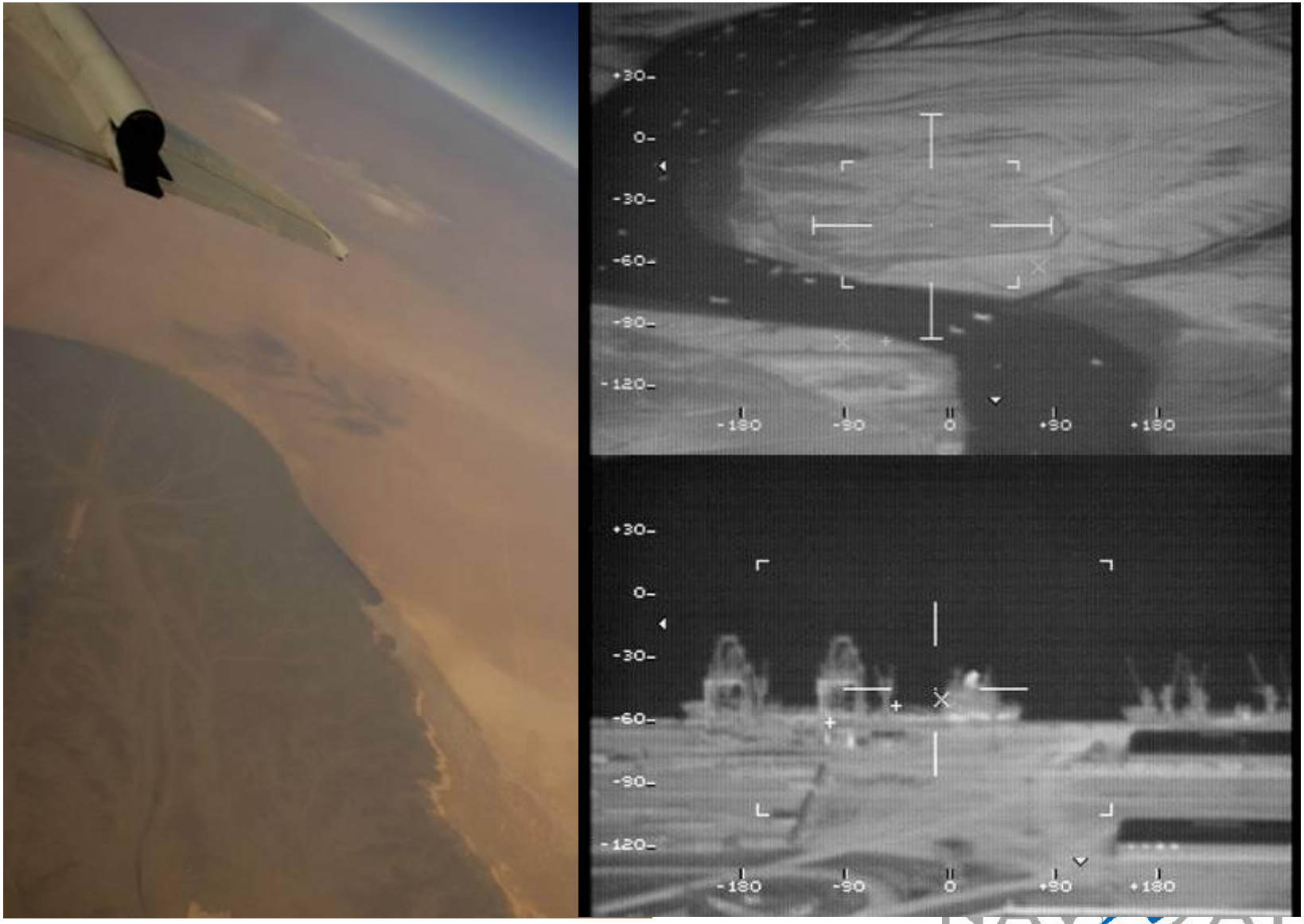
Evolving Land Requirements



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Overview of Air 7000

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AIR 7000

Objective: Replace AP-3C capability with mix of manned & unmanned systems

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Introduction to Air 7000

- AP-3C Orion
  - fatigue/corrosion
  - aircraft system supportability
  - mission system obsolescence
  - planned withdrawal around 2015 to 2018
- Range of Options
  - Refurbishment or Replacement
  - Use of UAS as adjunct to manned platforms
- Capabilities
  - Maritime Patrol & Response
  - expand to emerging roles

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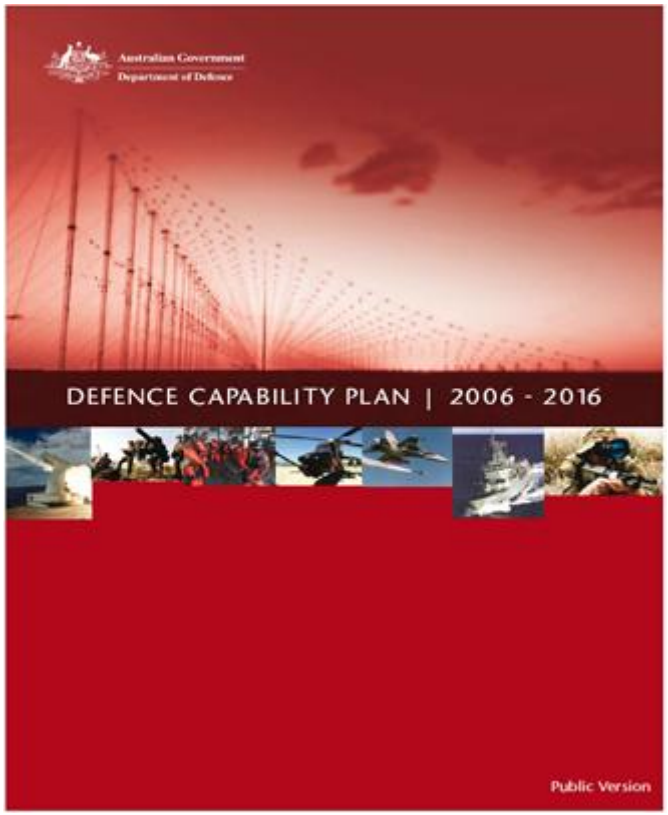
Defence Capability Plan



Source:
http://www.defence.gov.au/dmo/id/dcp/DCP_2006_16.pdf

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Air 7000

"AIR 7000 will consider the future of the AP-3C in the context of future Australia Defence Force requirements for maritime patrol and response. This will include the exploration of a broad range of options including aircraft refurbishment/re-manufacture or replacement, and the use of Unmanned Aerial Systems (UAS) as an adjunct to manned platforms. While the project will be focused on the acquisition of a capability centred on maritime patrol and response roles, it will also support electronic and land surveillance roles."
(DCP 2006-2016)

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Air 7000 Phase 1

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Air 7000 Phase 1 - Scope

"consider and further develop options leading to the acquisition of a high altitude long endurance unmanned aerial system that can perform all-weather, long endurance surveillance and reconnaissance tasks over maritime and land environments"
(DCP 2006-2016)

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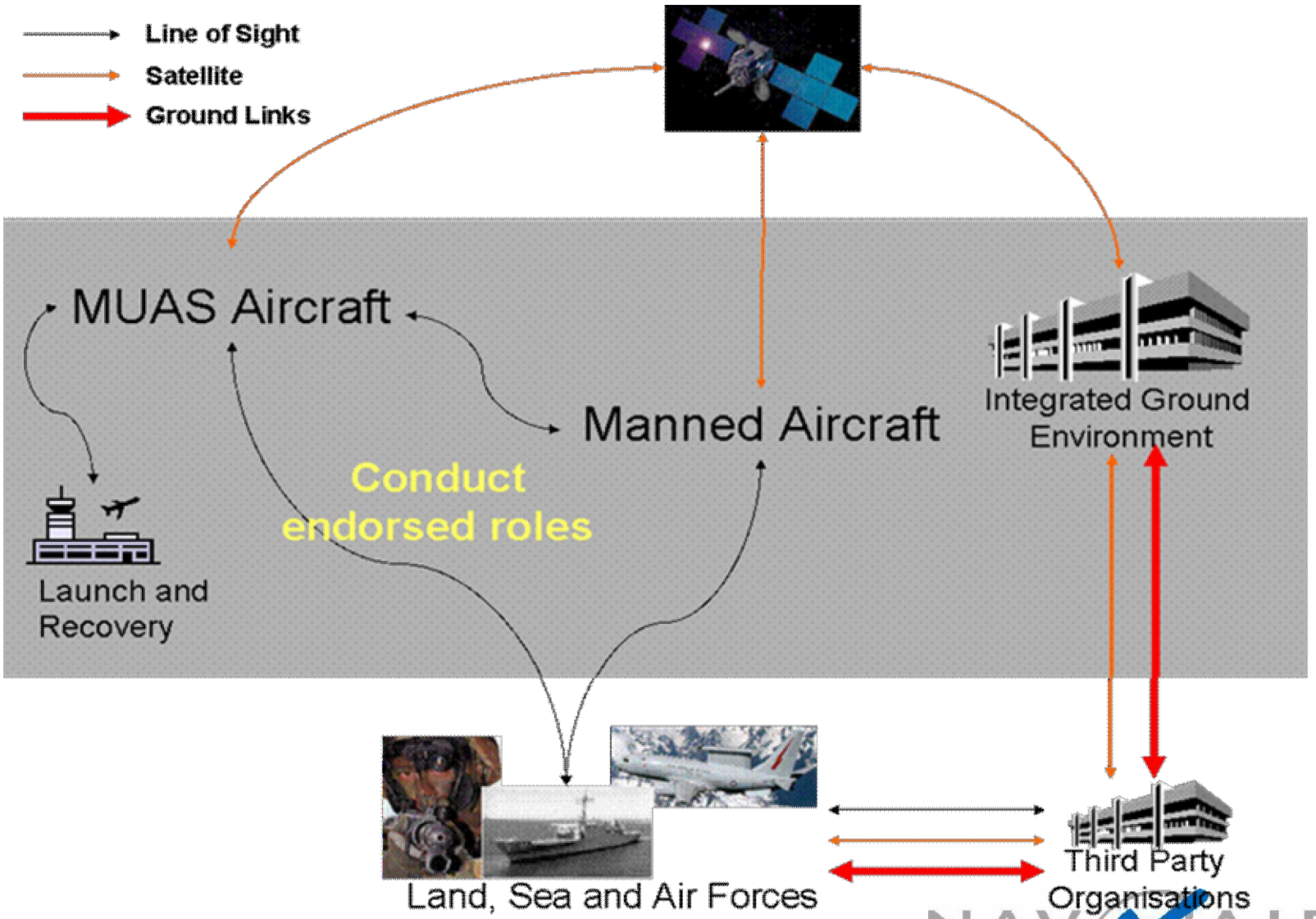
AIR 7000



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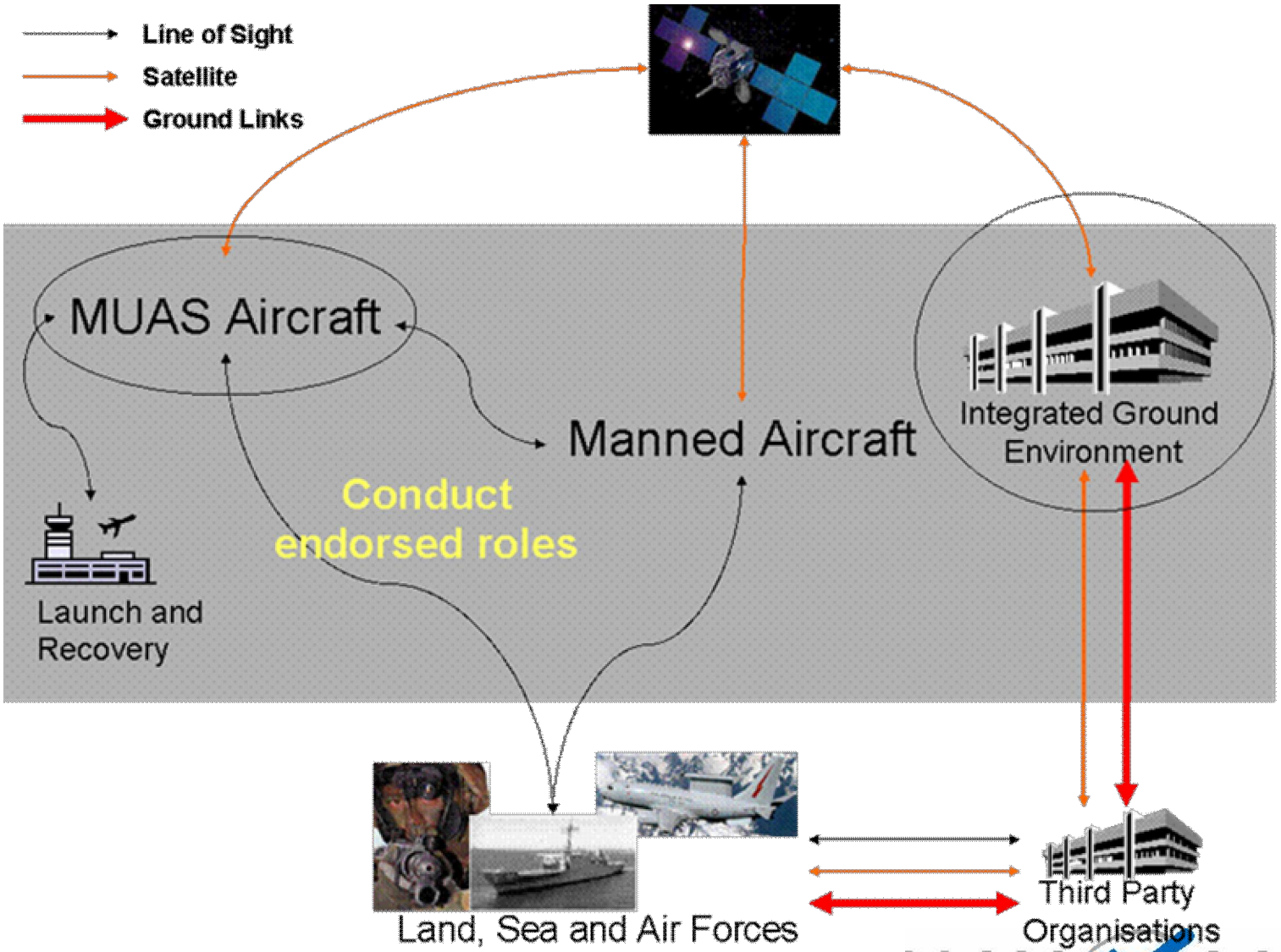
AIR 7000 Phase 1



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Integrated Ground Environment

MUAS Mission Control Element

Intelligence Support Facility

Exploitation

Intel Services

Dissemination

Simulators and Part Task Trainers

Mission Planning

Mission Analysis

Mission Replay

Plans and Operations Cell

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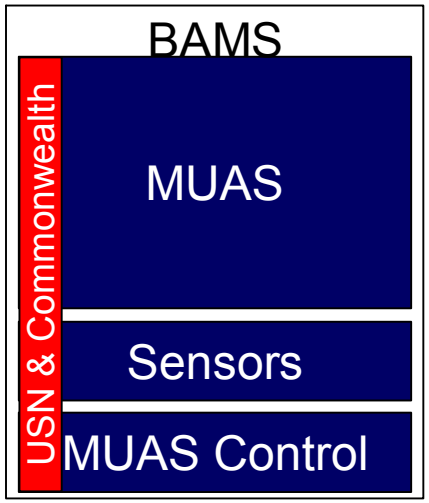
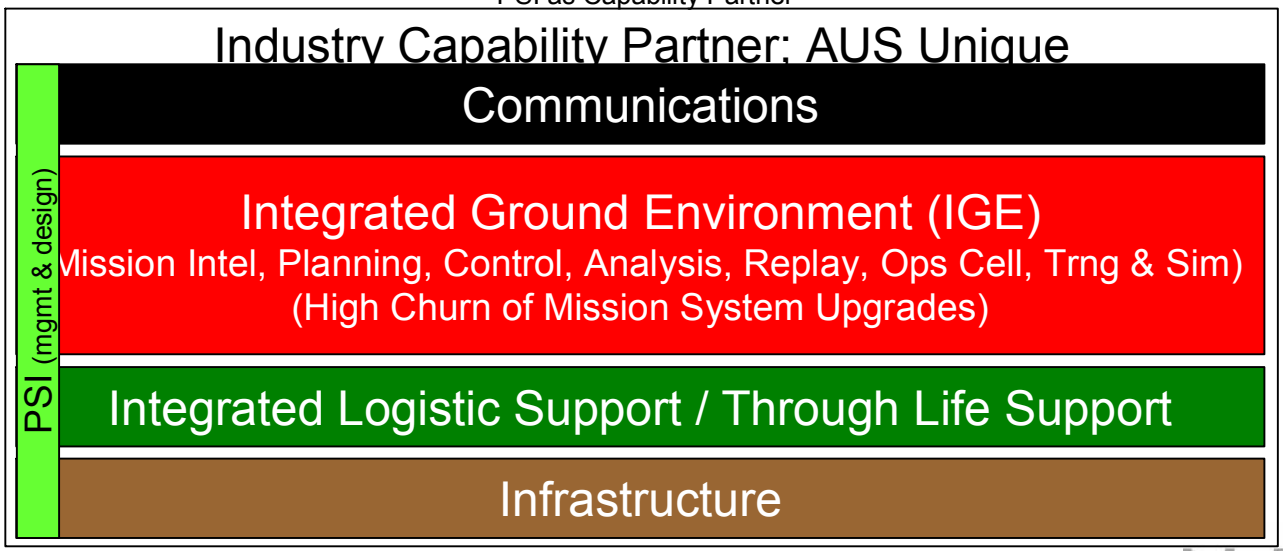
Program Structure



Associate Contractor Agreement

PSI as Capability Partner



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Air 7000 & BAMS

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Air 7000 & BAMS PA

- Australia involved in:
  - Australian Unique Objectives Definitions
  - Source selection
- Australian technical experts part of the BAMS IPTs
- Long term collaborative program anticipated

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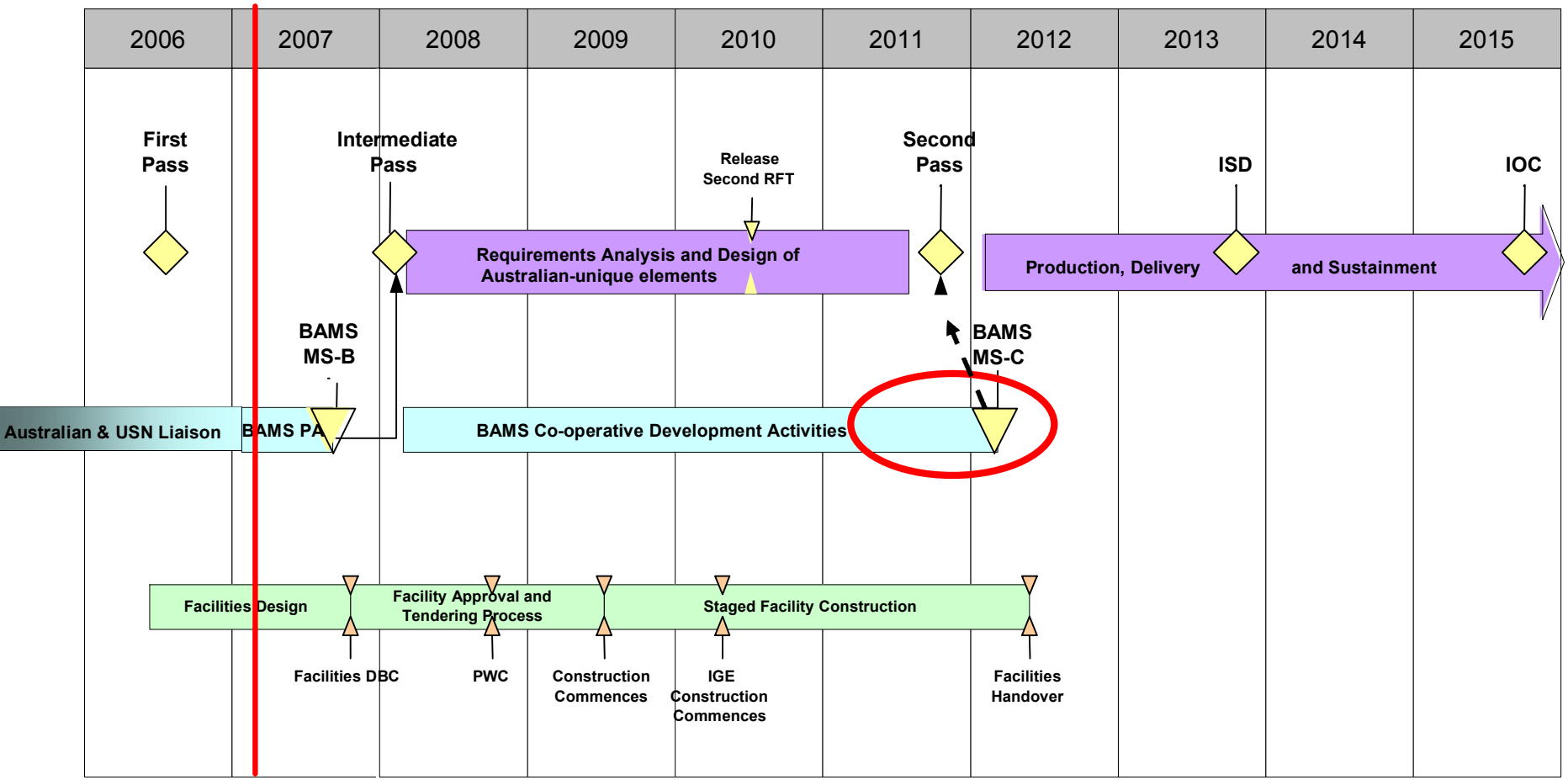
Schedule (CY)



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Intermediate Pass

- Sep 07 - BAMS Milestone B
- Nov 07 - Air 7000 reports result to Defence Capability Committee
- Early (CY) 2008 - Intermediate Pass
- Australian Government would approve:
  - Exercise Australian option
  - BAMS Post Milestone “B” MOU
  - Industry Capability Partner

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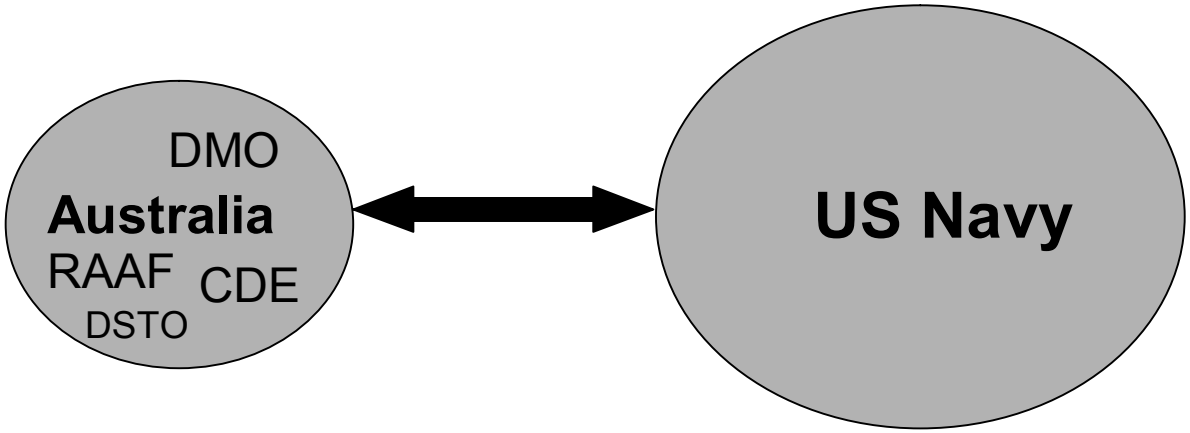
Relationships



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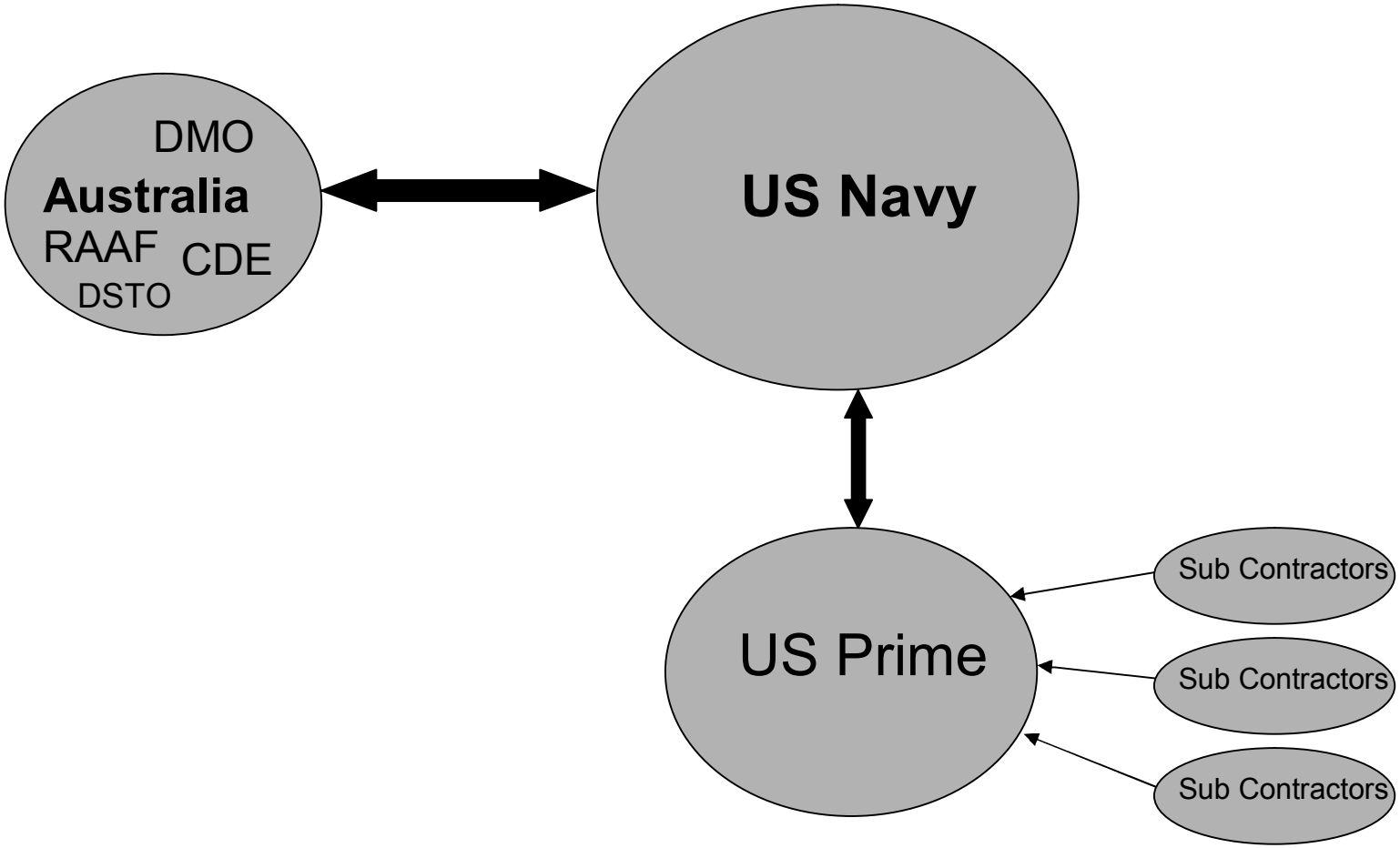

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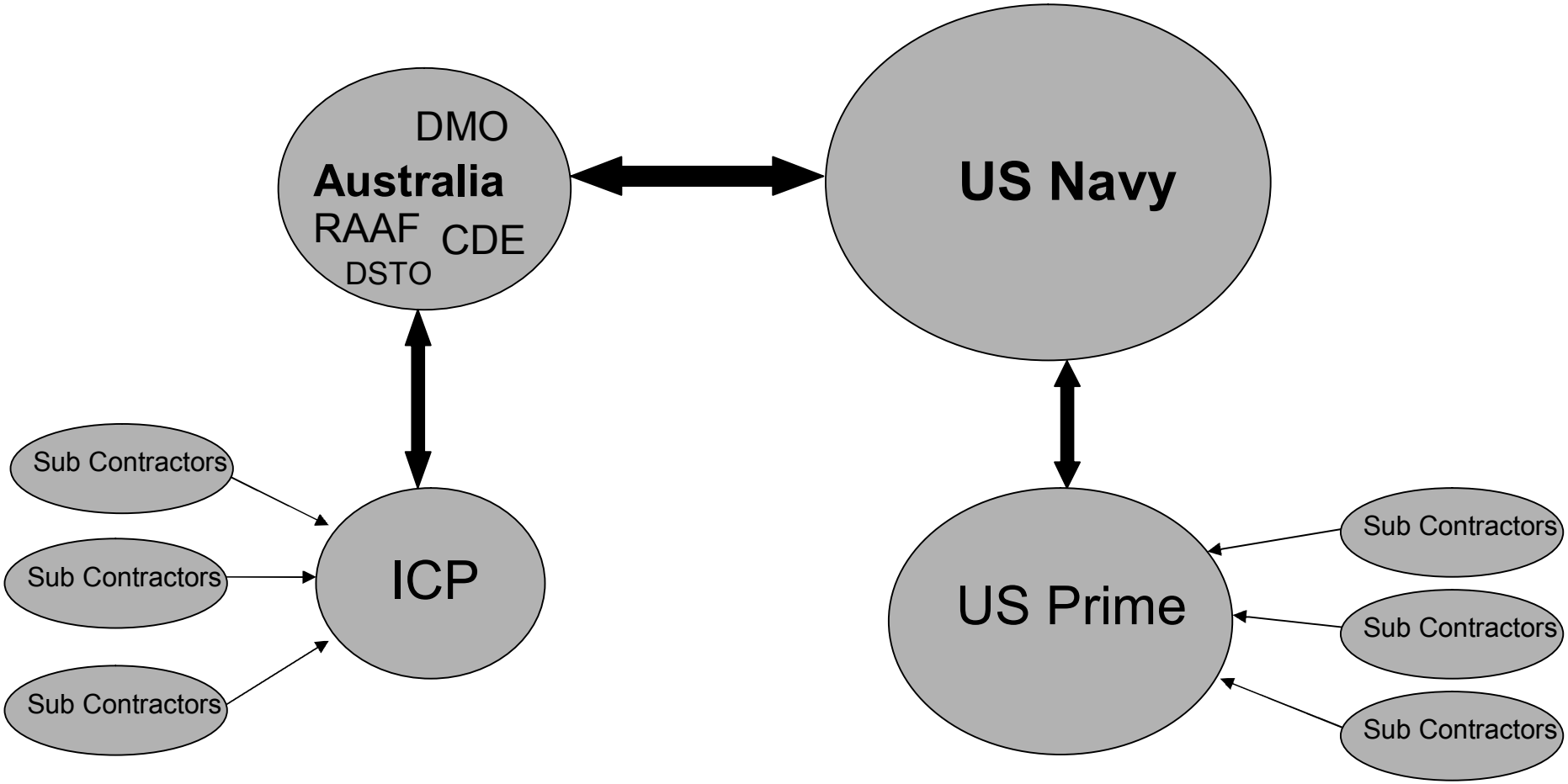

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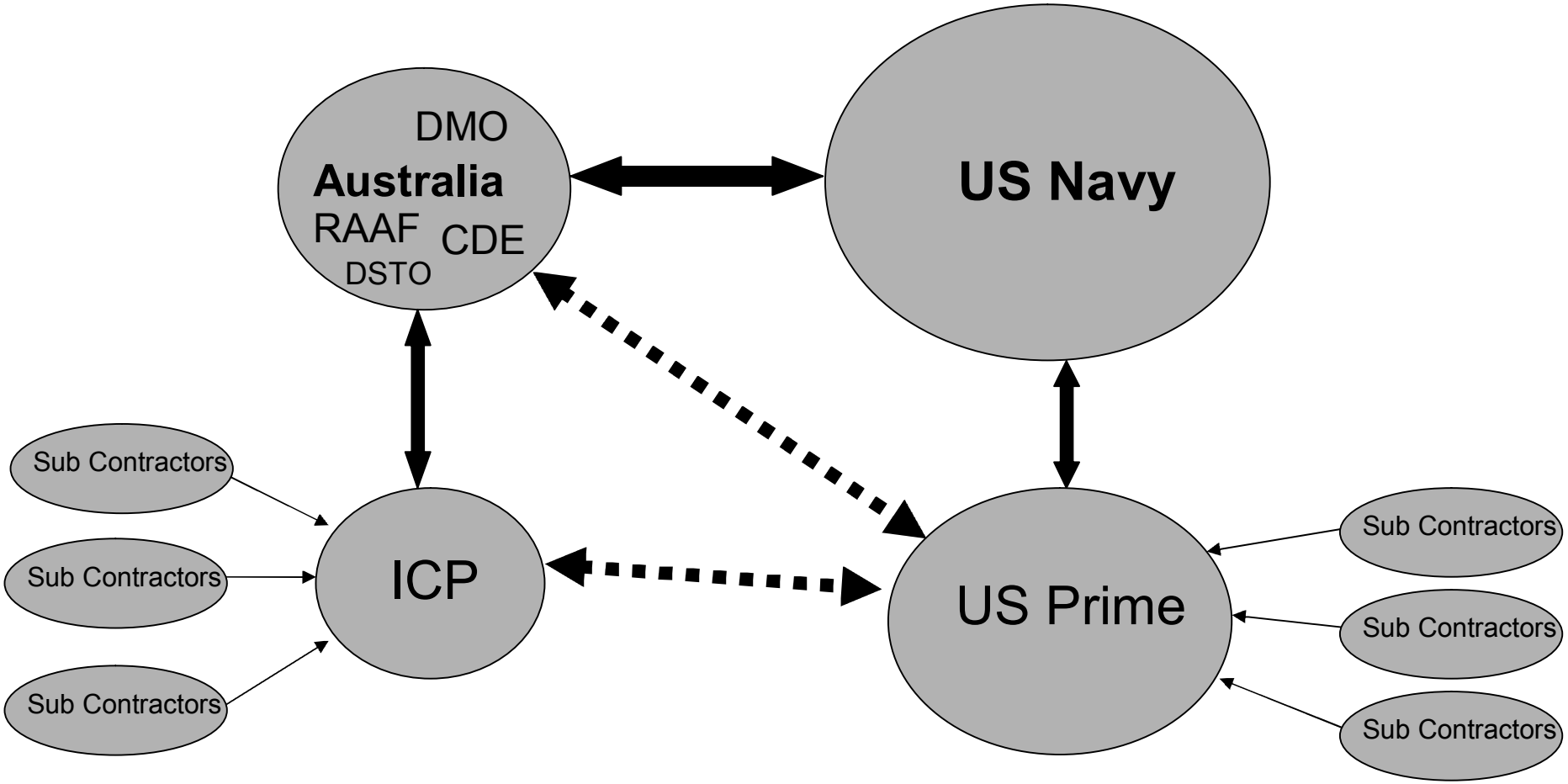

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BAMS UAS
Concept of Operations
CONOPS

LCDR Tim Day
OPNAV N88D2

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CONOPS Overview

- ***Assumptions***
  - ***Persistent ISR (Altitude and Standoff to avoid Threat Envelope)***
  - ***Forward Based, Tactical Support Asset***
  - ***Five Orbits Worldwide (24/7 Operations)***
  - ***Maritime and Littoral Dominance***
  - ***MPRF Family of Systems (MMA, EPX, BAMS UAS)***
    - ***Adjunct to the MMA P-8A***
    - ***Potential for teaming with EPX (EP-3 Replacement)***
  - ***Airborne Communications Relay (Wideband and Tactical)***
  - ***FORCEnet Enabler – ISR Node in Common Operational & Tactical Picture***
  - ***Multiple Sensors (Radar, EO/IR and ESM)***

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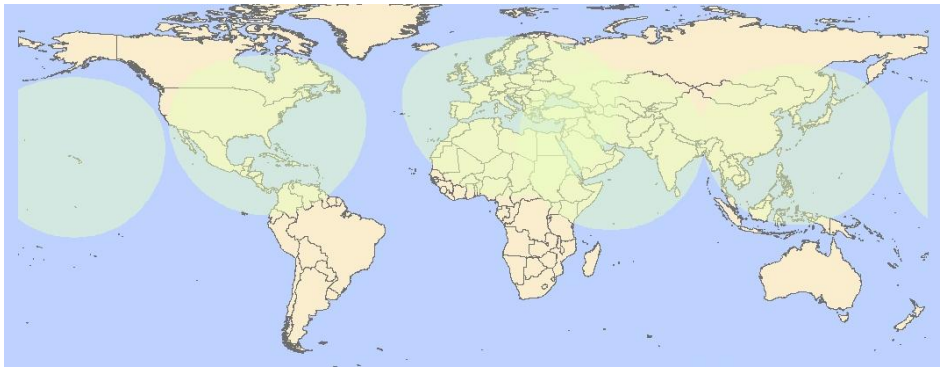
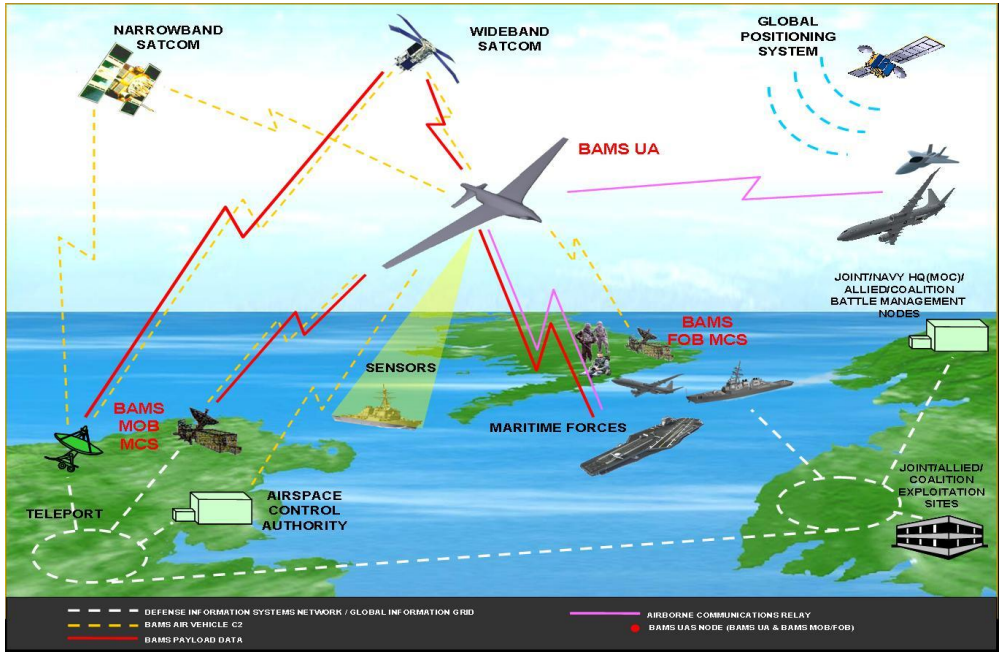
BAMS UAS – Persistent ISR



- *5 Orbits Worldwide by FOC*
- *24/7 Continuous Operations*

System of Systems (SoS)

- *Unmanned Aircraft*
- *Sensors*
- *Communications (LOS/BLOS)*
- *Mission Control System*
- *Supported by Contractor / Military Team*



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System of Systems (SoS)

- **BAMS Unmanned Aircraft System**
  - Sustained continuous operations at mission radius
  - No more than 3 UA airborne simultaneously per orbit
  - 5 orbits (FOC and beyond) supporting each Numbered Fleet Commander
- **Sensors**
  - Maritime Radar
    - » 270 Degree Field of Regard (FOR)
    - » Search, detect, track, image (ISAR)
  - Imaging System
    - » EO/IR Turret – 270 Degree FOR
  - ESM System
    - » 360 Degree Coverage with Specific Emitter ID (SEI) and Automatic Identification System (AIS)

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System of Systems (SoS)

- Mission Control System (MCS)
  - Plan and Fly Missions
  - Conduct First Phase (Tactical) Analysis of Sensor Data
  - Disseminate Information to Tactical Users
- Communications (LOS/BLOS)
  - Communications and Data Relay System
    - » Voice and Data Relay Capability (Notional 4 ARC-210 and TCDL)
  - Global Information Grid (GIG)
    - » Simultaneous Dissemination of Sensor Data
- Systems Support
  - Proposed Contractor Logistics Support (CLS) and Launch & Recovery
    - » Business Case Analysis (BCA) to Determine
  - Mixture of Military and Contractor Operators

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Employment and Integration

- *Mission Planning*
  - *Capable of completely pre-programmed mission track, communication plan and sensor employment plan*
  - *Modifiable in-flight to support real-time tasking*
- *UA Launch and Recovery*
  - *Contractor or Military Controlled*
  - *Line-of-Sight (LOS) control passed to MCS Beyond Line-of-Sight (BLOS) control*
- *On-Station*
  - *Sensors and UA managed by MCS Pilot/Mission Commander and crew*
- *MMA – BAMS UAS On-Station Interoperability*
  - *Tripwire*
    - *BAMS Cueing with P-8A Target/Kill*
    - *Level II Control with MMA*
      - *Proposed Level IV Control – MMA Spiral 1*
    - *Level IV with EPX (EP-3 replacement)*
    - *Cross-cue with EPX sensors*
  - *BAMS Battlespace Awareness*
  - *Cooperative Targeting*

UAV levels of control

Level I: Indirect receipt of sensor data
Level II: Direct receipt of sensor data
Level III: Sensor data C2
Level IV: Air vehicle C2
Level V: Takeoff and landing control

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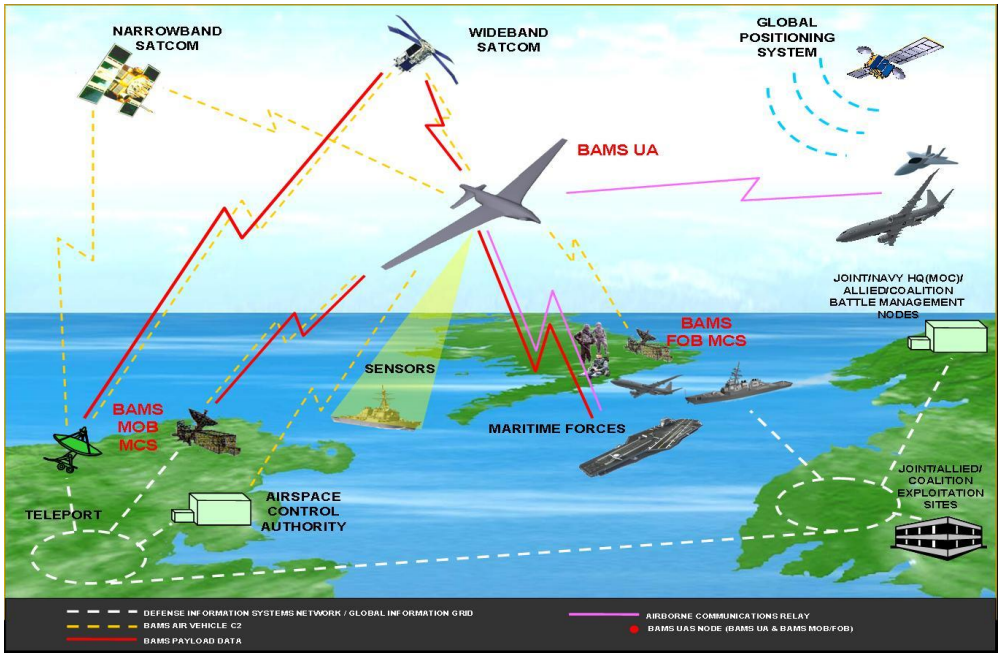
Sensor Data Dissemination

- **Mission Planning Phase –**
  - ISR tactical planning to support theater or SG requirements
  - Coordinate Data Dissemination Plan
- **On Station Phase –**
  - Airborne Communications Relay Capable
  - Sensor Date Disseminated via:
    - » Defense Info System Network / Global Information Grid
    - » Common Data Link (CDL)
    - » Tactical Common Data Link (TCDL)
  - UA Flight Control via both LOS & BLOS
- **Possible Reach Back Nodes**
  - COCOM, JIC, MHQ/MOC, ONI, FIST, RSOC and Organic
  - EPX (if no WB SATCOM)



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Man, Train and Equip

- **Manning –**
  - ~25% support from MMA Squadron
  - 3 to 6 Person Crews (8 Crews for Continuous Ops – 6 TSC & 2 P-8A)
  - Crew Functions Include Tactical Coordination, UA Operations and Sensor Employment / First Phase (Tactical) Data Analysis
  - Mission Commander responsible for Mission Accomplishment and Data Release
- **Training –**
  - Pilots, Mission Commanders and Sensor Operators will be FRS Trained
  - Expertise from Sea (MMA/EPX Squadron) to Shore (TSC) Rotations
- **Maintenance and Equipping –**
  - Performance Based Logistics (Proposed – BCA to Determine)
  - Contractor to perform most launch and recovery functions
    - » Potential for organic operator support if desired

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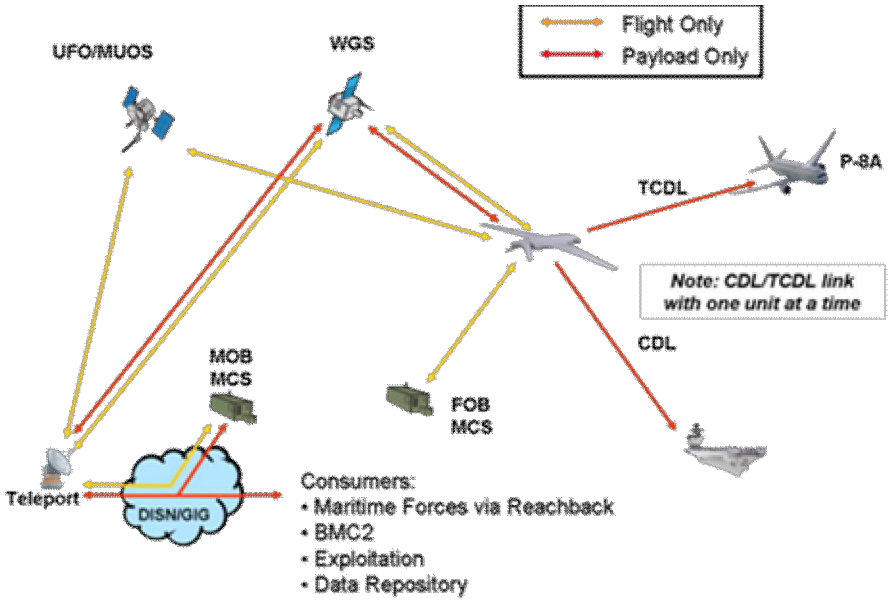
Challenges

- ***Airspace Access***
  - ***Due Regard while in International Airspace***
  - ***Risk to Civil Aviation***
- ***Link & Bandwidth Availability***
  - ***Limitations of Commercial Satellites***
  - ***Bandwidth limitations in the Fleet***
- ***Survivability***
  - ***Altitude / Standoff***
    - ***Balance Commander's Need with Threat Environment***
  - ***Network Vulnerability – Disruption and/or Control***



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Summary

- *Persistent Maritime / Littoral ISR Capability*
- *Forward Based*
- *Supporting Numbered Fleet Commanders*
- *Sensor Data – Near Real Time / Pushed to the GIG*
- *Component of MPRF FoS (MMA, EPX, BAMS UAS)*
- *MMA (P-8A) Adjunct*
- *Operationally Supported through the TSC Structure*
- *Capable of Autonomous Operations (Takeoff, Mission and Recovery)*

24/7 Continuous – Worldwide – Maritime/Littoral Intelligence, Surveillance and Reconnaissance

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Draft PBSS Modifications
and
Draft RFP Modifications
(Sections L & M)

Tom Garrett
PMA 263 Chief Engineer
AIR-4.1

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Agenda

- RFP Technical Change Highlights
- BAMS UAS Elements
- Technological Maturity Assessment
- Performance Based System Specification (PBSS)
- Effective Time on Station (ETOS)
- Service Life
- Technical Library
- Additional Section L Changes
- Australian Option Overview

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RFP Technical Change Highlights

- **Technical Section Changes driven by:**
  - Addition of Australian Unique Objectives (AUO) – Project Agreement signed 13 Jan 07
  - Systems Requirement Review (SRR) conducted 16-17 Nov 06
  - OSD led Program Support Review (PSR) conducted 4-7 Dec 06
  - Independent Open Architecture compliance review completed 4 Jan 07
  - Compliance with ASN(RDA)'s Software Process Improvement Initiative (SPII) dated 17 Nov 06
  - Gov't review of industry comments on Draft RFP

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BAMS UAS ELEMENTS

(1) Unmanned Aircraft (UA)

(2) Mission Payloads (MP)

(3) Communications Suite (CS)

- LOS and BLOS

MP and CS included in the UA

(4) Mission Control System (MCS)

(5) Support System (SS)

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Technological Maturity

- Public Law 109-163 contains Section 801 requiring that critical technologies be at TRL 6 by MS B
- BAMS UAS requirements do not drive technology
- Offerors must perform a Technology Maturity Self-Assessment (TMSA) as part of the proposal
  - Identify Critical Technology Elements (CTEs)
  - TMSA WBS may have to be at a lower level than the CWBS
- Official TRA decision is made independent of Source Selection at MS B

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BAMS UAS PBSS Changes

- Performance requirements primarily documented in the main body and classified annex
- Prescriptive requirements regarding airworthiness requirements are provided in Appendices D1 and D2
  - Contain both mandatory and tailorable requirements
  - Offerors must respond by meeting all of the mandatory requirements and may propose alternative approaches to the tailorable requirements in coordination files
- All requirements will become mandatory and part of the SDD PBSS/contract
- All CDD objective capabilities have been added to the PBSS

Allows innovation from industry while defining the airworthiness design criteria at the beginning of SDD

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BAMS UAS PBSS Changes

- **Removal of term Airborne System (AS), replaced with UA**

- **Inclusion of CDD Objective Requirements into PBSS**
  - Examples:
    - 95% ETOS over 30 days
    - 3000 nm minimum mission radius
    - 10 hour time to on-station at 2000 nm mission radius
    - UA transition through moderate icing/turbulence
    - On-station presence requiring no more than 2 UA
    - MP data processing from 3 UA simultaneously

- **Additional Open Systems Architecture Requirements**
  - Use of open standards and Application Programming Interfaces (APIs)
  - No closed standards or APIs
  - HW/SW partitioning into self-contained functional elements

- **Additional Mission Systems Trainer (MST) Requirements**
  - MST Instructor Operator
  - MST High Level Architecture Design
  - MST interoperability and simulation environment

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BAMS UAS PBSS Changes

- **Updated/New Safety Requirements**
  - Updated Hazard Risk Index Matrix
  - Flight Critical Software to comply with RCTA DO-178B
  - Automatic IFF Squawk of 7700 during emergency w/lost comms

- **Additional Requirements to PBSS Main Body**
  - Unaided autonomous landings at pre-surveyed airfields
  - UA Interrogation of IFF Mode 1, 2, 3/A, 3/C, 4 and Mode 5
  - IFF Inhibit command at MOB/FOB MCS
  - UA to provide turbulence data to MOB/FOB MCS
  - NBSC operations during normal and emergency conditions to maintain comms during engine out divert

- **Change to ETOS Definition in Appendix A**
  - Systems associated with REQUIDS 786, 788, 30010, 30080 & 30150 need to be available to be considered mission capable

- **Information Assurance references DIACAP instead of DITSCAP**

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BAMS UAS PBSS Changes

- **Deletion of Requirements Verification Matrix from Appendix H**

- **Addition of Annex C – Classified Annex for Australian Unique Objectives (SECRET REL USA/AUS)**
  - Type 3 small target detection/classification/ID
  - Overland requirements
    - GMTI
    - AMTI
    - Accuracy

- **Addition of Appendix I - Australian Unique Objectives**
  - Active sensor based report on UA separation w/other aircraft
  - Active sensor weather data reported to MOB/FOB MCS
  - Weather avoidance interleaved with other active sensor modes
  - No permanent damage to UA when operating in continuous light icing/turbulence
  - Automatic IFF Squawk of 7600 during lost comms

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Effective Time on Station (ETOS)

–[REQID 15] The UAS shall be capable of maintaining 80 percent (Threshold) and 95 percent (Objective) *ETOS* executed within a period of 168 continuous hours, at a *mission radius* of 2000 Nautical Miles or greater from its operating base using the long range endurance ISR *mission* profile, definitions, ground rules, and assumptions found in Appendix B, Profile A.

- Must be on-station at mission radius for 134 (minimum) out of 168 continuous hours
- Must be mission capable on station
  - Per the definition for ETOS – must be able to perform the following REQUIDs while maintaining air vehicle flight worthiness:
  - 786, 788, 30010, 30080, and 30150
  - BLOS comms, detection, classification, monitoring
- Calculated using the long range endurance profile in Appendix B
- ETOScalc has been updated to reflect industry comments
- PPA removed from the calculation

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ETOS Parameters

ETOS Input Table

Parameter		Input
#days per deployment	The length of the scheduled period of station coverage; number of days is converted to hours	
#UA's Total	The max number of Unmanned Aircraft (UA) potentially available for the single 2000nm orbit; Max AS's simultaneously aloft is 3.	
UA **ground speed**	UA Ground Speed in knots – zero wind	
UA **total endurance**	Total number of hours a UA can remain aloft while flying the Long Range ISR Mission Flight Profile at "UA ground speed"	
$MFHBA_{DC}$	Mean Flight Hours Between Abort *(definition in the BAMS UAS PBSS)*	
$MCMT_{ABORT}$	Mean Corrective Maintenance Time Abort *(definition in the BAMS UAS PBSS)*	
MFHBF	Mean Flight Hours Between Failure *(definition in the BAMS UAS PBSS)*	
MTTR	Mean Time To Repair *(definition in the BAMS UAS PBSS)*	
Total Ave Pre-Flight Scheduled Maintenance	Average number of hours spent inspecting, mission programming, & preparing a UA for launch *(definition in the BAMS UAS ETOScalc User Manual)*	
Total Ave Post-Flight Scheduled Maintenance	Average number of hours spent discovering, diagnosing failures, & processing a UA for a potential maintenance period *(definition in the BAMS UAS ETOScalc User Manual)*	
MLDT	Mean logistics delay time *(definition in the BAMS UAS PBSS)*	

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Service Life

- 5 continuous orbits will require 43,800 on-station flight hours/year
- Ingress/Egress time will add to the total required fight hours to maintain persistence at 900 nm
- Require an explanation, with substantiating information, of how the proposed UAS will provide the required performance over the 20-year service life
  - No requirement for a single UA to have a fatigue life of 20 years
  - Provide any actual data that supports the proposed fatigue life for the UA

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Technical Library

- Includes information necessary to understand the program, including:
  - Reference documents from the PBSS
  - Draft Government SEP
  - Draft BAMS UAS CONOPS
  - ETOS model

- Availability of the Technical Library (and other BAMS UAS program documentation) announced via 26 JAN 07 FedBizOps announcement
  - Data available by request through the PCO
  - Provided via CD-ROM vice IDE

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Draft Section L
Proposal Instructions Outline

Volume I	Executive Summary
Volume II	Technical
Book 1	Design Approach
Book 2	Programs and Schedule
Volume III	Past Performance
Volume IV	Experience
Volume V	Cost
Volume VI	Australian Unique Option
Volume VII	Exceptions and Deviations
Volume VIII	Streamlined Alternate Proposal Addendum
Volume IX	Classified (up to classification level of proposal) - Provide No Foreign as separate Section in this Volume

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RFP Change Highlights – Section L
- General -

- 1.0 General
  - Added a statement encouraging offerors to respond to objectives, including AUO
- 3.0 Proposal Content and Volumes
  - Added AUO – Technical Attachment 3 (Tailorable Spec)
  - Added Annex M – Software Development Plan to comply with ASN (RDA)'s SPII
  - Added Volume 6 – AUOs (doubled the length of Section L)
    - » Technical
      - Design Approach
      - Program and Schedule
    - » Cost
  - Completed Cross Reference Matrix

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RFP Change Highlights
Section L

- **4.0 Proposal Submission**
  - Past Performance – 30 days
  - All information – 60 Days
- **6.0 Classified Data**
  - Added language regarding Australian involvement
  - Added language to allow for levels beyond SECRET/NOFORN
    - » Notify w/in 4 weeks of any requirements beyond SECRET
- **7.0 Technical Library/Data**
  - Tech library will be provided solely by CD-ROM

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RFP Change Highlights
Section L

- **Volume 2 – Technical**
  - **2.1.1.3 – Mission Control System**
    - » **Added language regarding implementation of mission planning as a result of the SRR**
    - » **Added language regarding Joint Mission Planning System (JMPS) as a result of the PSR**
  - **2.1.1.5 – Support System**
    - » **Clarified language and added training information per PSR input**
  - **2.1.3 Open Systems Architecture**
    - » **Added additional language to the life-cycle supportability assessment to address results of external OA assessment**

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RFP Change Highlights
Section L

- Volume 2 – Technical
  - 2.1.4 Effective Time on Station (ETOS)
    - » Clarified input parameters and definitions per industry comments
    - » Removed the term “AS” from the PBSS and RFP - UA includes the airborne Mission Payloads and Communication Suite components
  - 2.1.4.1 Reliability
    - » Clarified language per PSR to ensure accurate inputs to ETOS model and ensure consistency with definitions in the PBSS
  - 2.1.4.2 Maintainability
    - » Clarified language per PSR to ensure accurate inputs to ETOS model and ensure consistency with definitions in the PBSS
  - 2.1.6 Mission Performance
    - » Added level of detail to assist the evaluators in assessment of the proposed solution
      - Detailed performance attributes requested for potential radar and EO/IR solutions

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RFP Change Highlights
Section L

- **Volume 2 – Technical**
  - **2.1.6.4 Communications, Data Management and Dissemination**
    - » **Added "Communications" to the title**
    - » **Added language regarding the assessment of the Net-Ready requirements per post SRR discussions**
  - **2.1.9 Operational Availability**
    - » **Same requirements and language that was previously under ETOS. Moved to avoid confusion regarding ETOS parameter inputs.**
  - **Annex D to Book 1 (Detailed RM&A Predictions)**
    - » **Definitions clarified per PSR to ensure accurate inputs to ETOS**

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RFP Change Highlights
Section L

- **Volume 2 – Technical**
  - **2.2.1.1 Technical Data/Rights**
    - » Language added to assess extent to which the SOO objectives can be met
  - **2.2.5 Systems Engineering Management**
    - » Two Independent Program reviews were added IAW ASN(RDA)'s SPII
  - **2.2.7 T&E**
    - » Language was added per the SRR to provide additional details regarding the test planning – total flight test hours, flying rate, etc.
  - **2.2.8 CMMI**
    - » Redundant language removed to provide clarity
    - » Updated CMMI Requirement from Version 1.1 to 1.2
  - **2.2.12 Software Development Plan**
    - » Added paragraph to comply with ASN(RDA)'s SPII

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RFP Change Highlights
Section L

- **Volume 3 – Past Performance**
  - No substantive changes to date
- **Volume 4 – Experience**
  - To comply with ASN(RDA)'s SPII, added SSD task experiences for:
    - » Software development
    - » Software processes and approaches

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NAVAIR

RFP Change Highlights
Section L

- **Volume 5 – Cost**
  - To be covered by Ms. Monica Smith
- **Volume 6 – Australian Option**
  - Technical (requested deltas)
    - » Design Approach
      - Repeated “U.S.” Design Approach Instruction with appropriate PBSS, SOO, and CLIN references
    - » Program & Schedules
      - Repeated “U.S.” Program & Schedules Instruction with appropriate PBSS, SOO, and CLIN references
  - Cost
    - » Repeated “U.S.” SDD & Data Rights Cost Instructions with appropriate AUO CLIN references

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Australian Option Overview

- No mandated RFP Requirements for Australia
  - Everything is objective or tradeable
- Added a separate CLIN for Australian Unique Objectives (AUO)
- Added separate Cost Sub-Factor in Sec M
  - Assessment will only impact the Australian Cost Subfactor, which is under the Cost Factor
- Added AUO Volume 6 in Sec L
  - For purposes of schedule, assume the AU contract modification for CLIN 0301 will occur 6 months after initial contract award
- SOO Section 4.0 was added for the Australian Objectives
- AUO added to the PBSS
  - Annex C – Classified objectives
  - Appendix I – Unclassified objectives

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Draft Section M
- Factors/Sub-factors -

TECHNICAL
(Rating & Proposal Risk)

- Design Approach
- Programs and Schedules

PAST PERFORMANCE
(Performance Risk)

EXPERIENCE
(Performance Risk)

COST/PRICE
($$$ & Cost Risk)

- SDD/LRIP1 Option
- Operations & Support
- Production
- Tech Data Rights
- Australian Unique Objectives

Note: Order of importance is not indicated or implied

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Volume 6 Technical Proposal

Design Approach Sub-factor/Book 6.1.1

Section L Paragraphs:

- 6.1.1.1 Overall Design Approach
  - 6.1.1.1.1 Systems Overview
  - 6.1.1.1.2 UA
  - 6.1.1.1.3 MCS
  - 6.1.1.1.4 External Systems
  - 6.1.1.1.5 Support Systems
  - 6.1.1.1.6 Hardware and Software Overview
- 6.1.1.2 Proposed Tailored Specification
- 6.1.1.3 Open Systems Architecture
- 6.1.1.4 ETOS
  - 6.1.1.4.1 Operational Availability
  - 6.1.1.4.2 Reliability
  - 6.1.1.4.3 Maintainability
  - 6.1.1.4.4 Unmanned Aircraft Performance
    - 6.1.1.4.4.1 Mission Radius/Endurance Capabilities
    - 6.1.1.4.4.2 Engine Performance
    - 6.1.1.4.4.3 Mass Properties
- 6.1.1.5 Due Regard
- 6.1.1.6 Mission Payload Performance
- 6.1.1.7 Service Life
  - 6.1.1.7.1 Fatigue Life
  - 6.1.1.7.2 Flight loads
  - 6.1.1.7.3 Ground Loads
- 6.1.1.8 UA Space, Weight and Power (SWaP)
- 6.1.1.9 Operational Availability
- 6.1.1.10 Spectrum Compliance
- 6.1.1.11 Attrition Mitigation
- 6.1.1.12 Architecture Growth
- 6.1.1.13 Sensor Autonomy

Note: Request engine performance data be provided 4 weeks prior to proposal due date

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Volume 6 Technical Proposal

Program & Schedule
Sub-Factor/Book 6.1.2

Section L Paragraphs:

- 6.1.2.1 Proposed SOW & CDRLs
- 6.1.2.1.1 Technical Data Package/Rights
- 6.1.2.2 Integrated Management Plan
- 6.1.2.2.1 GFP/GFE/GFF/GFI List
- 6.1.2.3 Integrated Master Schedule
- 6.1.2.4 Technical Maturity
- 6.1.2.5 Systems Engineering Management
- 6.1.2.6 Risk Management Plan
- 6.1.2.7 T&E
- 6.1.2.8 CMMI
- 6.1.2.9 Transition to Production
- 6.1.2.10 Subcontract Management
- 6.1.2.11 Small Business Concern/Subcontracting Strategy
- 6.1.2.12 Software Development

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Volume VI AUO Deltas

- 6.1.1 Design Approach
  - The subsequent paragraphs and following table will be used to define only the differences between the baseline design defined by the USN requirements …
    - » Specifically, in the columns below, enter “no” if there are no changes to the baseline configuration enter “yes” and identify the associated paragraph number where those changes are described.
- 6.1.2 Programs and Schedules
  - The following table will be used to define only the differences in the baseline plan defined by the USN requirements …
    - » Specifically, in the columns below, enter “no” if there are no changes to the baseline plan, enter “yes” and identify the associated paragraph number where those changes are described.

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AUO Delta Table

Baseline Sect L Para	Australian Annex Paragraphs Numbers	Section L Paragraph Title	CLIN 0301
2.0	6.1	Technical Volume	
2.1	6.1.1	Book 1 Design Approach	
2.1.1	6.1.1.1	Overall Design Approach	
2.1.1.1	6.1.1.1.1	System Overview	
2.1.1.2	6.1.1.1.2	Unmanned Aircraft (UA)	
2.1.1.3	6.1.1.1.3	Mission Control System (MCS)	
…	…	…	
2.2	6.1.2	Program and Schedule	
2.2.1	6.1.2.1	Proposed SOW/CDRLS	
2.2.1.1	6.1.2.1.1	Data Rights	
2.2.2	6.1.2.2	Integrated Master Plan	
2.2.3	6.1.2.3	Integrated Master Schedule	

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Cost Proposal Instructions

Monica Smith
AIR - 4.2
Cost Team Lead

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- Outline -

- Updates to Cost Proposal Instructions
  - Volume 5 Cost
    - » No change in intent of instructions; minor edits for clarity, e.g., sections are paragraph numbered
    - » Section 7, Data Rights – Language added to assess extent to which the SOO objectives can be met
  - Volume 6 Book 2 Australian Option (AUO) Cost
    - » Deltas ONLY to "U.S" baseline
    - » Section 1 – AUO SDD
      - Repeated "U.S." SDD Cost Instructions with appropriate AUO CLIN references
    - » Section 2 – AUO Data Rights
      - Repeated "U.S." Data Rights Cost Instructions with appropriate AUO CLIN references
- Cost credibility rests with the offeror
  - Focus Areas from 29 November 2006 Pre-Solicitation Conference, e.g., Detailed Substantiation and Common Shortfalls
- Summary

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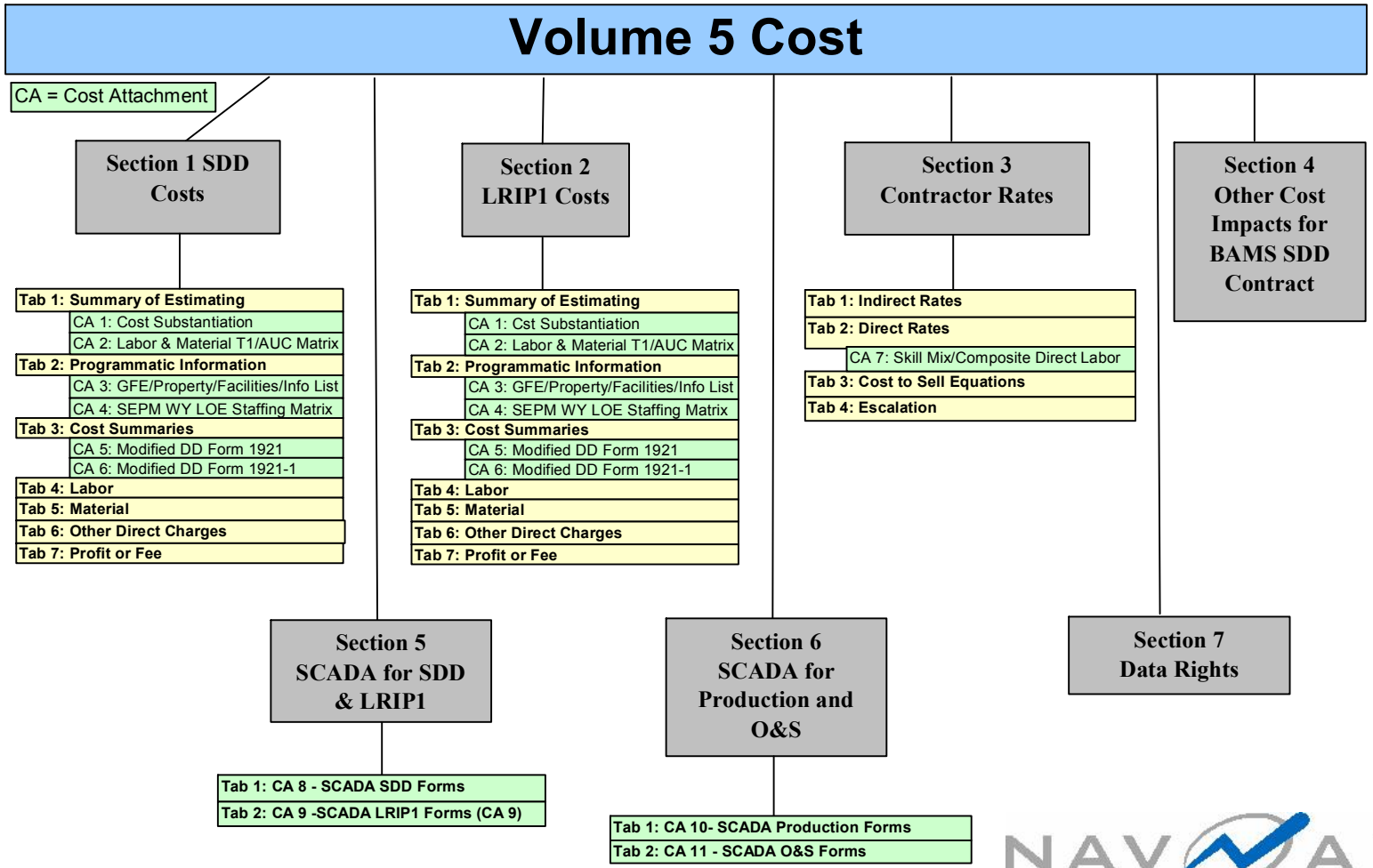
Draft Proposal Instructions - Volume 5 Cost Overview -

- **Proposal instructions are structured to facilitate the evaluation by organizing the offeror's information**



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Draft Proposal Instructions - Volume 6 Book 2 Cost Overview -

- **Proposal instructions are structured to facilitate the evaluation by organizing the offeror's information**

Volume 6 Book 2 Australian Option Cost

CA = Cost Attachment

Section 1
Australian Unique Objectives (AUO)
Option Item 0301

Section 2
AUO Data Rights

Tab 1: Summary of Estimating Methodology
CA 1: Cost Substantiation
CA 2: Labor & Material T1/AUC Matrix
Tab 2: Programmatic Information
CA 3: GFE/Property/Facilities/Info List
CA 4: SEPM WY LOE Staffing Matrix
Tab 3: Cost Summaries
CA 5: Modified DD Form 1921 Example
CA 6: Modified DD Form 1921-1 Example
Tab 4: Labor
Tab 5: Material
Tab 6: Other Direct Charges
Tab 7: Profit or Fee
Tab 8: Contractor Rates
CA 7: Skill Mix/Composite Direct Labor Rates
Tab 9: CA 12 - AUO SDD SCADA Forms

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Things to consider

- Help the evaluators – prevent them guessing or searching
- Provide historical data vice a reference
- Ensure traceability throughout the proposal
- Ensure Technical and Cost proposals are consistent
- Provide only data and information that is relevant in a concise and direct manner
- Cost Risk will be assessed
- We want to accept your Estimate - Show us your work!

Cost credibility rests with the offeror
Please substantiate the estimate!

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RFP Overview (Sections A-K)

Clare Carmack
AIR 2.0
Contract Specialist

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Section B

- Addition of 0300 series CLINs for Australian objectives
- 0301 US requirements plus an Australian unique Radar, Communication System, SIL and Environmental Plan (Cost Plus Award Fee)
- 0302 – Technical, Financial and Administrative Data for CLIN 0301
- 0303 – 0305 for Australian Unique Data Rights (Firm Fixed Price)

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Sections C,D,E,F,G,H

- Addition of 0300 series CLINs for Australian objectives
- Special Instructions for Australian Funds
- Section H clause 5252.245-9520 Associate Contractor Clause removed from final RFP; to be incorporated upon identification of Australia's Industry Capability Partner and exercise of CLIN 0301

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Sections I, J, K

Section I

- Updated all Clauses with the latest changes to the FAR and DFARS
- Included the Specialty Metals Clause/Deviation 252.225-7014 Alt I per recent ASN guidance
  - http://acquisition.navy.mil/policy_and_guidance/policy_memos2006_

Section J

- Incorporated DD Form 1423, Contract Data Requirements List
- Referenced the Australian Unique Objectives Appendix

Section K

- Written Release For Use of Australian Government Personnel in Evaluation of Proposals

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